Methods for Production of the Oxidized Glutathione Composite ...

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Fig. 1

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Reduced glutathione

Sodium salt of the reduced glutathione

1) [Pt(NH₃)Cl₂]

Disodium salt of the oxidized glutathione Composite with the cisdiamminedichloroplatinum

Fiq 2.

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COOH

O

NH

NH

COOH

O

S:

$$2\Theta$$

CI

Pt

CI

NH

COOH

O

NH

COOH

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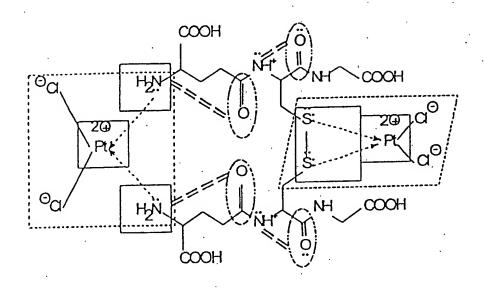


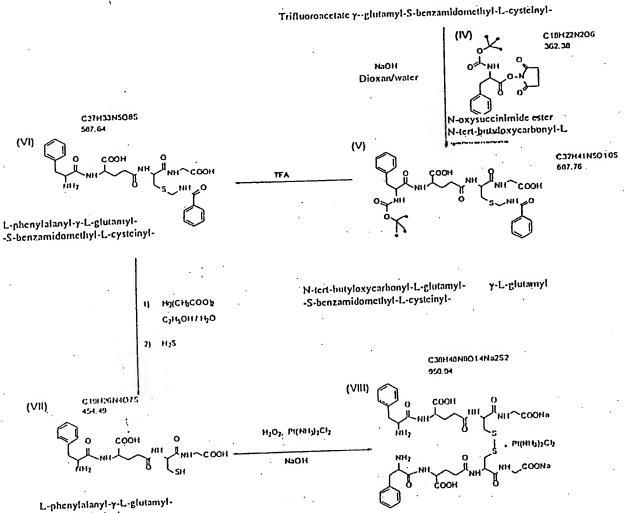
Fig. 5.

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Composite bis-(L-phenylalanyl-y-L-glutamyl)--L-cystinyl-bis-glycine with cis-diamminedichloroplatinum

-L-cystcinyl-glycine

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COOH

$$H_2N$$
 (s)
 NH
 S
 $Pt(NH_3)_2CI_2$
 H_2N
 (s)
 NH
 $COOLi$
 NH
 (s)
 NH
 $COOLi$

Fig. 9.

·

Fig. 10.

$$H_2N$$
 H_2N
 H_2N
 NH
 NH
 $COONH_4$
 NH
 $COONH_4$
 (II)

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Fig. 12.

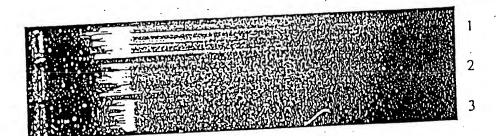


Fig. 13.

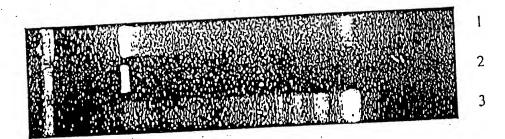


Fig. 14.

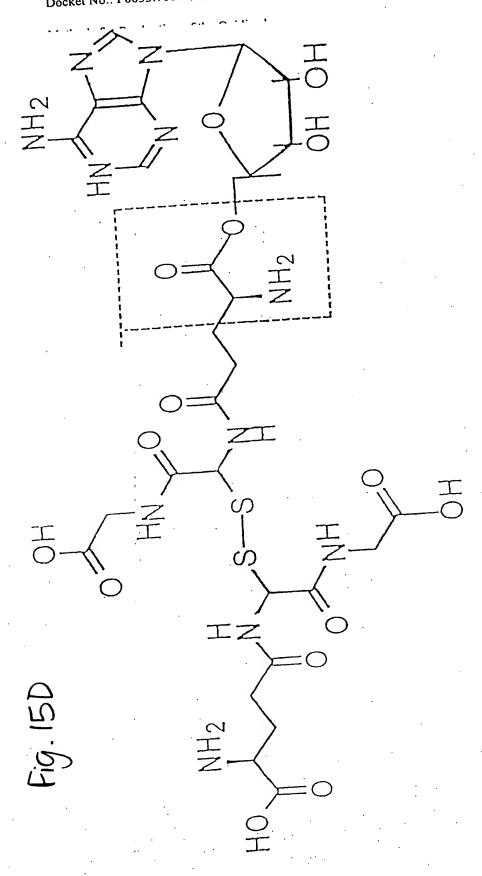
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HO S S

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Fig. 16A

Fig. 16B

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Fig. 16D

$$H_2N \longrightarrow \begin{pmatrix} O & CO_2H & H & O \\ N & N & CO_2H & H \\ N & N & CO_2H & N \\ N & CO_2H & N \\ O & CO_2H & O \end{pmatrix}$$

Fig. 16E

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Fig. 17A

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Fig.
$$17F$$
 CO_2H
 CO_2H
 CO_2H
 CO_2H
 CO_2H
 CO_2H
 CO_2H
 CO_2H

fig. 17E

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Fig. 18A

$$HO_2C$$
 HO_2C
 HO_2

Fig. 18B

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64 1 6 B 1 4 64 64 64

$$\begin{array}{c|c}
CO_2H & H & O & H \\
N & N & N \\
N$$

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Glutathione Composite ...

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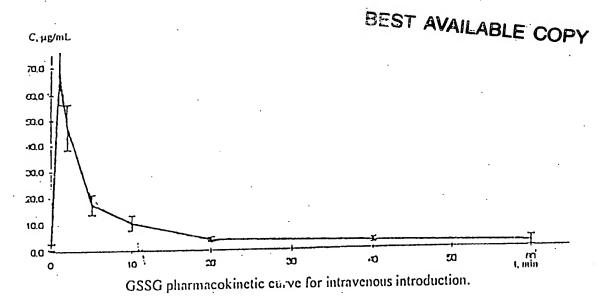
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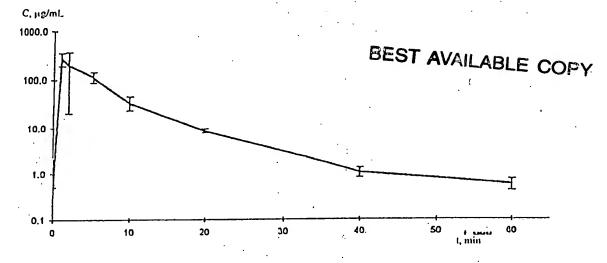
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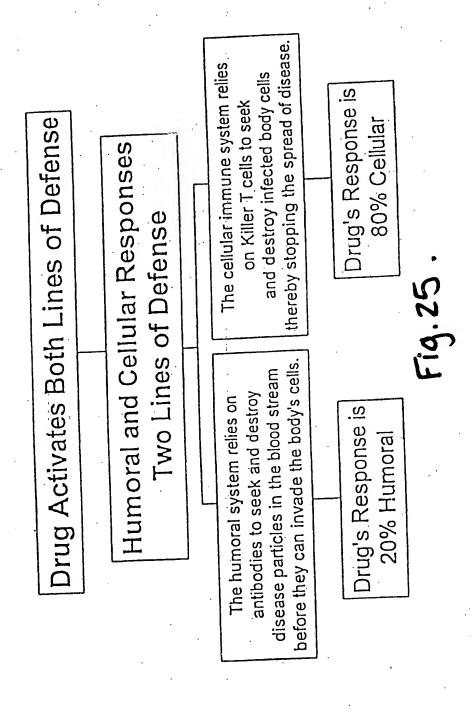
GSSG•Pt pharmacokinetic curve for intravenous introduction

F16. 24

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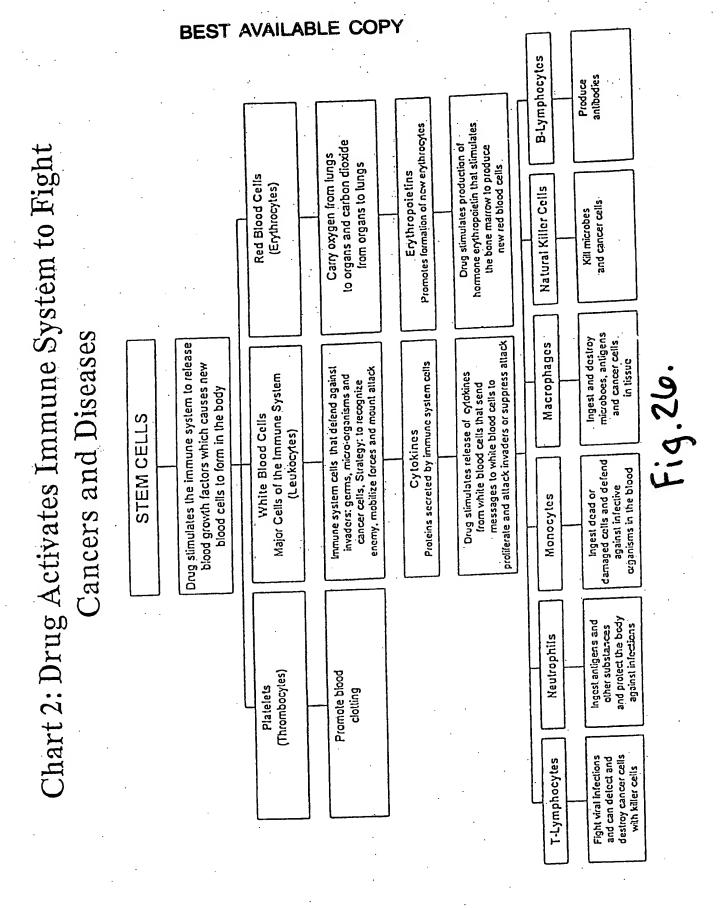
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Chart 1: Immune System Response to Cancers and Diseases



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Serial No.: Not Yet Assigned Docket No.: P0633.70014US01 numbers of neutrophils due to chemotherapy. BEST AVAILABLE COPY stimutates the production of neutrophils and is given to patients who have low GM-CSF with TNF-alpha hemorrhage, soften and turn black. Macrophages begin when they are recruited to the scene destroys cancer
cells, but does not
hurt healthy cells.
Tumors injected to pump-out huge amounts of TNF of Injury or infection. TNF-alpha In 1996, Blogen received FDA approval to market AVONEX for multiple sclerosis. warts, Kaposi's sarcoma, haby cell le utemia and malignant melanoma. Chart 3: Cytokines Stimulated by Drug alpha and gamma activates cells effective in treating several forms of hepatitis, genital Interferon Is secreted by

B cells and macrophages
and acts in synergy
with IL-2 to activate cytotoxie T cella. Natural Killer cells and Thi cells are also proliferate by IL-12. Interfeukin-12 stimulated to (11-12) Fig. 27. Cytokines Stimulated by Drug downregulates MHC II
expression on antigen
presenting ocils.
it the racts with II-4 to decrease macro-phage infammatory activity. tole and acts on macrophages to inhibit eyfokine production to downreguizte suppresses cytokine production from T cells and macriphages. It exerts complex THI type of The per cells. It is released by TH2 helper cells and also regulatory effects on CD4+T cells, Natural Killer cells, vascular endobellal ce ils and

B fymphocytes.

IL-10 plays an
importam in/bibiory Interleukin-10 (IL-10) intection. Neutrophils are the first line of defense against invading tackeria adhers to vascular endothetal cetts. This helps neutrophils marginate and enter and are found in all areas of infection. endothelial cells secrete IL-8 in order to ettract ne utrophils and silow them to the tissue where they are needed, especially during inflammation and is a powerful chemotactic factor for neutrophils. Macrophages and Interleukin-8 F.-8 number of undescribed ways in Inflammatory regulation. by IL-f., it also strongly stimulates hepatocytes to make acute phase proteins In response to inflammation. This cytokine is always found in increased kevels in sites of information and is likely very important in a stem cells are helped is secreted by monocytes, macrophages and bore marrow cells. It acts on proliferating B cells to promote stimulates ambbody secretion. Myeloid differentiation into plasma cells and H to differentiate Interleukin-6 (11-6) regulatory manner to decrease the activity of activated macrophages. is released by
Theiper cells of the THZ
subtype and is
particularly active and other allergy-related antibodies. IL-4 acts with IL-10 A B cell stimulated with IL-4 alone on resting and active B cells. On resting B cells and on macrophages becomes a plasma cell secreting lgE IL-4 Increases MMC E differentiation is stimulated and an antibody class switch is induced. expression. On activated B celts, proliferation and Interleukin-4 (F-4) lym phocyta activated killer cells which are rednjected into the body, then killer cells will attack the caroer and destory it. or iddney cancer have been retrieved from the body and exposed in the lab cells would mee've IL. Is chemical message to expand. For example, by cancer ardgens so only those lymphocytes that recognize cancer T-tymphocytes exposed to malignand metanoma and stimutates
tymphocytes that
have already
been activated to II-2 to create is produced by lymphocytes. It is a T-cell growth factor Interleukin-2 (1:3) finnum responses usually associated with non-specific finnum response of infaction and inflammation, and faver, is produced by monocytes, macrophages, and dendritie cells. Interleukin-1 h activates lymphocytes and theraby regulates F.3

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